JULY
1969
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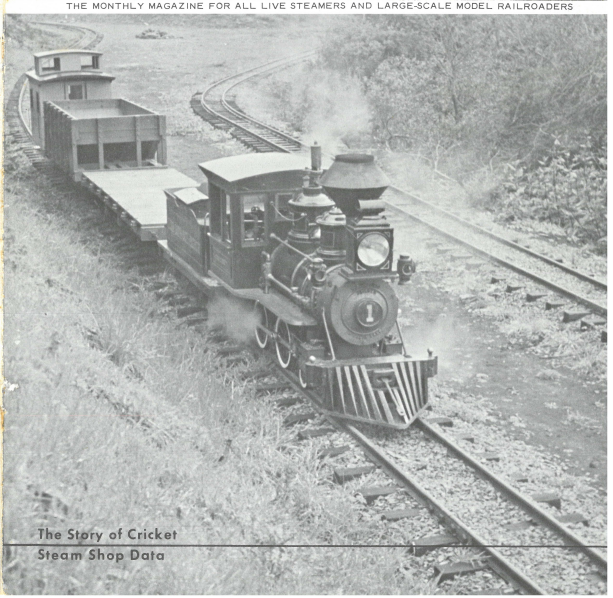
Live Steam®

THE MONTHLY MAGAZINE FOR ALL LIVE STEAMERS AND LARGE-SCALE MODEL RAILROADERS



The Story of Cricket

Steam Shop Data

Live Steam
magazine

JULY 1969 VOL. 3 NO. 6

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COVER PHOTO

CRICKET, in an idyllic setting, will be remembered by Live Steamers from all over the world. Photo by Erich Thomsen.

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The story of the Tilden, South Gate & Pacific's

Cricket is gone, long live the *"Four Spot"*

Live Steamers in the San Francisco Bay area have at one time or another made a pilgrimage into the hills of Tilden Park back of Berkeley to see and ride behind the little *Cricket*. One of the few commercial steamers that looks and acts the way a steamer should, she was the brainchild of Erich Thomsen, a mechanical engineer for the Western Pacific.

Erich has covered the route from the deck of big articulateds to the drafting boards of the front office so he knows railroading inside and out. This is evident in the trackwork and rolling stock of the Tilden South Gate and Pacific Railway.

Cricket started out in the Ottaway shops of Wichita, Kansas as a boiler and chassis to which Erich added the refinements that make an engine look like an engine. Not the least of these was the replacement of the little lead truck wheels and the substitution of square end connecting rods for the soup bones that were original equipment.

As in all narrow gauge mountain railroads, washouts and land slides are a constant hazard and the Tilden South Gate & Pacific is no exception. In 1958 a mud slide took the engine house down the hill. Some pieces of equipment are still lost in the mud, but *Cricket* was resurrected and continued to click off the miles. However, the end was in sight as something a little bigger than the loading permitted on the 12" gauge layout was needed so the 5" scale, 15" gauge was born.

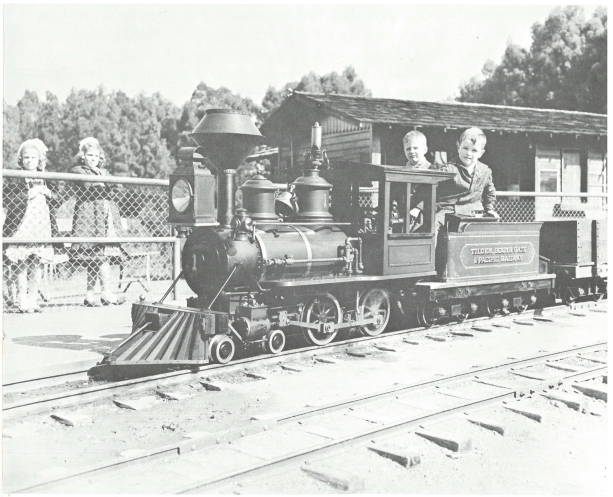
Work was started on a 2-4-2 tender engine and stockpiles of rails and tiles started rising along the right-of-way. In 1967 the *"Four Spot"* was completed and went on display in a Berkeley hardware store while track work continued and the first pieces of rolling stock were finished.

On a Sunday in January of 1968, *Cricket* made her last run. The next five days were spent in alternating sun and rain, widening the 12" out to 15" gauge, placing switches, ballasting and putting the 15" gauge wheels on the gas dinky that would handle the trains until the *#4* could be brought up the hill. By Saturday, it was done with no interruption in service, the 15" gauge was operating.

Present plans call for a major expansion program including a 60' tunnel, already in the process of construction. Although *Cricket* is gone, Live Steamers, children and parents will continue to climb the hill to see and ride on the most detailed and complete miniature narrow gauge in the country.

Cricket

by Francis A. Orr
PHOTOS BY ERICH THOMSEN



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Over 100 attend

Iowa Spring Meet

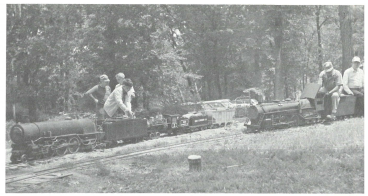
by Pershing G. Scott
PHOTOS BY H. E. BRAKKE (1-5) AND BILL WARRICKS (6)

Despite real adverse weather, the Annual Spring Meet of the Iowa Model Steam Engineers, Inc., was held on June 7th and 8th with great success.

Live Steamers from eleven states attended with fourteen ¾" engines, two 1" engines and six 1½" engines. Just about every wheel classification was represented from Shay's and 0-4-0's up through 4-8-8-4's. Heavy rains created mud in the steaming bay areas but it didn't stop the running. All engines performed at their very best and the track – particularly the 1½" ground level track – was not affected by the moisture.

After a fine dinner (which was served in the Town Hall) an evening of movies was enjoyed during which the first big thunder storm of the season dropped 3" of rain! We can't really believe it, but the question still persists, "Did all those high-powered exhausts upset the atmosphere *that* much?"

Early morning found the 1½" track occupied (1) by Ron Beckman's 4-6-2, Harold Everson's Heisler and "Pappy" Ray Whitaker's Hudson. On the ¾" track the big and small were represented by Ted Young's 4-8-8-4 (2) and his 2-6-0. (3) The new ¾" and 1" steaming bay served well as activity got under way. Getting ready for running were (4) Richard Garich (l to r) of North Riverside, Ill., M. D. "Snub" Pollard of Lorain, Ohio, Larry Edwards from Green Bay, Wisc., Ron Klienhans of Utica, Ill., Scott Deaton and Ron Christensen of DesMoines, Iowa. From South Bend, Ind., Fred Hanson brought his nearly-completed 1½" 4-4-0 (5) built from details in American Locomotive Engineering and many parts from the Winton Mogul. Earl Keslar from Omaha (6) managed to get a lubricator working and wore his "reward" prominently.



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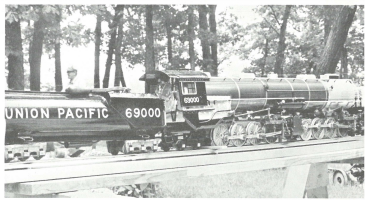

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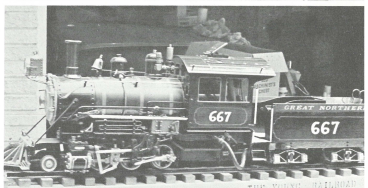

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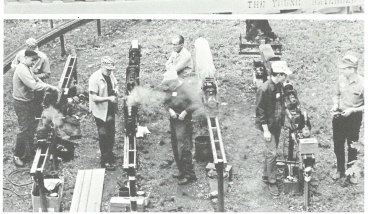

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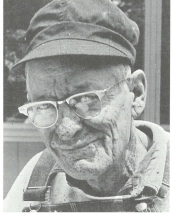

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FILES for the apprentice

by Jack D. McKenty, M.D.

You do not have to be a model engineer very long before you will appreciate a collection of files the way a gourmet will regard a cellar of fine wines. The beginner's two files, a medium sized and a little one, rapidly multiply to a whole rack full of various shapes and sizes. Not that they are all in constant use. Ninety per cent of my filing is done with just three files (a big one, a medium size one, and a little one), but when one of the stranger shapes or sizes is needed, nothing else will do.

Generally speaking, files are classified by shape, size, and the cut and size of the teeth. Mill files are the most common. They are rectangular in cross section, and taper toward the end in width but not in thickness.

Similarly shaped files include flat, pillar, equaling and hand, according to relative widths and various tapers. Don't worry about the various names of files. They are bandied about rather loosely, and the same file will be called by different names in different shops. If it is rectangular in cross section, call it a mill file and learn the rest of the details later.

The size of the file is the length of it in inches, not counting the tang. The tang is the pointy end which fits into the handle. Sizes range from 4 to 14 inches, with 6, 8 and 10 being the most common.

If the file has one set of parallel rows of teeth, it is single cut. If there are two sets of parallel rows at an angle to each other, it is double cut. The edges are usually single cut, even if the flats are double cut.

In the past, when files were made by hand, there were two sizes of teeth: coarse and fine. The inbetween offspring of these sizes, as made by machine, is still known as the bastard. The coarse teeth are now found on rasps, used by wood workers. Finer teeth come in two sizes, second cut and smooth.

The size of the teeth are relative to the size of the file, so that a 14" secondcut file has bigger teeth than a 4" bastard. They also relate to the kind of file. A bastard mill has finer teeth than a second cut flat file of the same length.

My big file is a 14" single cut bastard mill; the little one is a 6" single cut bastard mill.

Other shapes include the square, the triangular or taper or three-square, the round taper or rat-tail, the round or chain saw, the knife (which is wedge-shaped in cross section), and the half-round which is really half an oval-in cross section. Most of these shapes are available in bastard only, and are coarser than the same length bastard mill.

These files are obtainable in ordinary hardware stores. A file not so easily obtained, but one of the utmost importance to the model engineer, is the "hand file." This is like a mill file, but with one or both edges "safe," meaning without teeth. When filing against a shoulder with the ordinary mill file, the edge may do some unwanted cutting. Using the safe edge against the shoulder prevents this.

The safe edge is so important that it is almost a necessity to have one or two hand files. My middle size file is a hand file.

Other files include the "Swiss Pattern" files, available from hardware wholesalers. These are mostly double cut, with a good variety of sizes, and seven different sizes of teeth ranging from #00, the coarsest, to #6, the finest. Once again the size range of teeth is relative to the length of the file. They come in about 12 different cross sections and many of the shapes have safe edges.

Still more specialized files are those designed specifically for lead, aluminum or brass. These have large sharp ridges instead of the usual teeth, so they clog less easily on softer metals.

There are also files without the usual tang, meant to be mounted in a special holder. They are used mostly for auto body repair work, but some people swear by them for the home workshop.

Needle files, or tool makers files, or sometimes die makers files, are Swiss Pattern files in a small size. They have round handles instead of tangs, and are sized by their overall length, including the handle. Sizes usually run 4, 5, and 6 inches, with cuts 0, 2, 4, and 6. Sets of needle files are available at hobby shops or Sears hardware departments.

Whenever you buy a file, also buy a handle for it. A file without a handle is unsafe. The wound produced by driving the tang of the file into your hand could lay you off work for weeks or months. Don't chance it.

Needle files can be held in a pin vise, but they are so light that using them without a handle is usually okay.

Files should be cleaned frequently. Large ones are cleaned with a "file card" – a sort of brush with short steel wires instead of bristles. Small files are best cleaned with an old tooth brush. Tapping a file gently against a wooden surface to shake out cuttings is okay, but do not tap it against the vise, or any other metal; files are brittle and may shatter.

Sometimes tiny chunks of metal may embed in the teeth of the file and cause scratches on the work. These "pins" as they are called, resist removal by brushing and have to be dug out with a pointed instrument.

Files should not be stored loose in a drawer or piled on top of each other on the work bench. Ideal storage is in a rack, either hanging by their handles from hooks on a pegboard, or better, standing in slots in a board at the back of the work bench. Each file should be wiped with an oily rag to prevent rust and put in the rack as soon as you are done with it.

Files are expendable items. They gradually become dull and must be replaced. New files should be reserved for filing brass and bronze only. A file which has become too dull for brass or bronze will still work like new on steel.

For more information, write Mr. E. J. Porter, Simonds Saw & Steel Div., Intervale Road, Fitchburg, Mass. 01420 and ask for "File Catalog F–100" and "How to Choose and Use Files." This company has generously offered to send either or both of these publications free on request. Please mention LIVE STEAM Magazine.

building the RARITAN

by William H. Morewood

In constructing the Smokebox (12–2) set it up in the lathe and lay it out the same way that the boiler barrel is layed out. This is described under "Boiler Construction". following Scribe the outline of the stack flange hole and the base plate hole accurately.

Place the two wood discs in the ends of the barrel. Drill a series of 3/16 diameter holes around the inside of the stack flange and base plate hole layouts and remove the metal in the centers. Enlarge the holes by filing out toward the layout lines. Go slowly. The stack flange and base plate should fit as closely as possible.

Clamp the parts and silver solder as shown on the drawing using Sil-Fos.

The Boiler Assembly (14–1) is perhaps the most difficult part to set up and care should be taken to see that the centerlines on the parts are accurately located and matched up from one part to the next. It will be noticeable if the steam dome is not square or the handrail brackets are not quite on the same horizontal line and such things may be quite difficult to correct after the parts are brazed together.

To construct the Boiler Barrel (24–2), first turn two discs out of ¼" thick plywood so that they will just slide into the ends of the tube from which the barrel is to be made. Drill a ¼" hole through the center of each disc while it .is still in the lathe.

Cut the tube almost to length with a hacksaw. This must be done with care to avoid bending the tube out of round. Clean up the burrs on the ends and insert the plywood discs.

Center one end of the tube in the four-jaw chuck and support the other on a piece of ¾" diameter drill rod held in the tailstock chuck. The disc at the tailstock end should be pushed in far enough to permit a cut to be taken to clean up the edge. Next, reverse the barrel, clean up the opposite end and bring the barrel to the correct length.

The centers for the holes for the dome and the various fittings may be easily and accurately layed out while the barrel is still in the lathe. First, obtain a small metal block that will reach from the lathe bed up to the underside of a chuck jaw that is approximately on the horizontal center line. Mount a scriber in the tool post in such a position that it will not strike the chuck jaw. With the block in place, hold the chuck by hand against the block, paint a stripe with layout dye at either end and at any hole locations. Lightly scribe a line for a half inch at either end and at each hole location by moving the carriage and the cross slide.

Repeat the procedure, holding each of the four jaws of the chuck against the block in tum. Circumferential lines may be scribed at the hole locations by positioning the carriage and turning the chuck by hand.

Centerpunch each hole center lightly to avoid denting the barrel. Using a small pair of dividers, scribe a circle at each hole location. These circles should be 1/16" larger in diameter than the finished hole and will serve as a guide if the pilot hole runs out. Center punch also the horizontal and vertical center lines at each end of the barrel. These marks will later be used to line up the smokebox and the backhead.

Drill and tap the small holes.

Carefully file the hole for the steam dome flange. The flange should just slip in and rest on its small shoulder. It is important that the flange be held parallel to the boiler's horizontal centerline and perpendicular to its vertical centerline. Drill and tap a 4–40 blind hole in each side of the flange right at its intersection with the boiler barrel. Put a brass screw in each hole. Carefully file a notch in the barrel in each side of the dome flange hole to take the two screws. The notches should be of such a depth that the flange will be secure in both directions when its shoulder is touching the barrel at the front and rear and the two screws are seated in the notches on the sides. Check the location of the flange bolt holes to ensure that the throttle valve stem will be parallel to the boiler centerline.

To form the Firebox (24–8), glue several pieces of wood together to form a block the same size and shape as the inside of the firebox. Bend one piece of copper around the block to form the firebox sides and crown sheet. The copper will harden as it is being bent. It should then be annealed by being heated to a dull red heat and quenched in water. This may be done several times before the copper is all the way down on the block.

Enlarged Heads (24–1, –5, –6, –7, –9) are made by hammering the copper over suitable wood forms. Obtain some hardwood such as maple, approximately ¾" thick. Cut out pieces of wood to the desired inside dimensions of the flanged head. This must be done accurately. Cut them slightly oversize and then finish them to size with a coarse file. The dimensions of the finished copper head will just slide into the barrel or the firebox. Use a hammer with a hard rubber or plastic head. As the copper is worked it will become hard and should then be annealed. If this is not done, there will be a tendency for the work-hardened copper to crack at the bends.

The ragged edges of the flanges should then be trimmed or filed to the dimensions shown. Check to see that the flanged plates are snug fits in the barrel or the firebox. Thin silver solder joints are the strongest and a clearance of between .001 to .003" is considered best.

Next come the Flue Sheets (24–7, –9). It is difficult to drill the holes for the flues so close together in copper. They should be bored and this may be done as follows:

1. Layout the holes with a scriber and center punch each one.
2. Drill an 1/8 diameter hole at each center punch mark.
3. Hold the copper flat against the lathe faceplate and run the tailstock center into one of 1/8 holes to center it.
4. Clamp the copper to the faceplate and then slide the tailstock back. Be sure the work is adequately clamped – use at least four clamps.
5. Open up the hole with a larger drill and then bore to size.

Most 9" lathe faceplates are small with only four notch and few holes for clamping. Their usefulness may be increased by bolting on a larger 1/2" thick aluminum disc in which have been drilled many 10–32 holes. Bore the back of the disc 1/8" deep and of such a diameter that it will just slide into the cast iron faceplate. Hold it on with four ¼–20 socket head cap screws tapped into the cast iron. The holes should be counterbored in the aluminum so that the screw heads will be below the surface. Face the surface, turn the O.D., and scribe circles and radial lines to determine the locations of the screw holes.

Cold rolled strip ½ x 1/8" may be bent to form L-shaped clamps. Make the short leg the same length as the overall width of the copper flange and drill a clearance hole in the other leg for the 10–32 screw.

Fit the firebox parts together, line them up carefully and hold them with 6–32 screws made from phosphor

NOTES -

To insure that the finished boiler will conform to the design standards for strength and safety, metal specifications and proper fabrication and test procedures must be adhered to.

boilers may become weakened by corrosion and so should be tested hydrostatically to at least 150 p.s.i. once a year.

.20 A07 use soft solder except for the outside brass rings. all pressure joints must be brazed with a silver solder such as SIL-FOS.

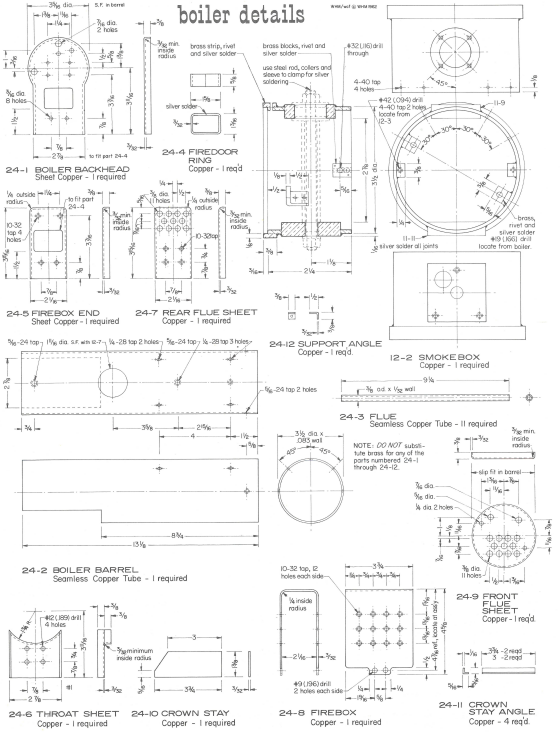
after brazing, fill the boiler completely full with water and pump the pressure up to 200 p.s.i. since water is not compressible any failure will immediately reduce the pressure to zero with no danger.

.20 A07 pressure-test the boiler with air or steam. both are compressible and a failure could result in an explosion.

it is for this reason that the maximum working pressure with air or steam is one-half the hydrostatic (or water filled) test pressure.

MAXIMUM STEAM OR AIR PRESSURE 100 LBS/SQ.IN.

boiler details


24-1 BOILER BACKHEAD
Sheet Copper - 1 required
24-4 FIREDOOR RING
Copper - 1 req'd
24-5 FIREBOX END
Sheet Copper - 1 required
24-7 REAR FLUE SHEET
Copper - 1 required
24-12 SUPPORT ANGLE
Copper - 1 req'd.
12-2 SMOKE BOX
Copper - 1 required
24-3 FLUE
Seamless Copper Tube - 11 required
NOTE: DO NOT substitute brass for any of the parts numbered 24-1 through 24-12.
24-2 BOILER BARREL
Seamless Copper Tube - 1 required
24-9 FRONT FLUE SHEET
Copper - 1 req'd.
24-6 THROAT SHEET
Copper - 1 required
24-10 CROWN STAY
Copper - 1 required
24-8 FIREBOX
Copper - 1 required
24-11 CROWN STAY ANGLE
Copper - 4 req'd.

bronze rod. Do the same with the backhead in the barrel. Remove the screws and disassemble.

In Brazing, there are four requirements for a good job:

1. The parts must fit properly. As mentioned previously, the joint clearance should be kept small.
2. The surfaces to be brazed must be clean and free of oil. Emery cloth may be used to remove scale and oxide.
3. The surfaces to be joined should be coated with a suitable flux just before brazing.
4. Heat should be applied in such a way that both parts will reach the brazing temperature at about the same time. Play the torch mainly on the heavier part that will need the most heat. A bushy flame that will heat a large area is best. Molten silver solder runs well and capillary attraction will draw it right through that part of the joint that is up to the brazing temperature. It is important to heat a large enough area to ensure that the silver solder will run all the way through the joint.

After the joints have solidified and cooled, the part may be quenched in water. Leave it in the water until the remaining flux has dissolved and then wash it off with hot water.

Easy-Flo is difficult to use on a copper boiler. A long period of heating causes oxide to form even in joints that have been well coated with flux. Easy-Flo will not wet the metal through the oxide. Also, it becomes fully molten over a range of only a few degrees and so will flow right through any gaps where the parts do not fit quite closely enough.

Sil-Fos has a slightly higher melting temperature but overcomes both difficulties. It will wet beneath the oxide very well. In fact, the manufacturer states that, on copper-to-copper joints, flux is not needed, though it may be used. Sil-Fos also melts slowly over a wider temperature range and so can be kept in a sufficiently viscous state to fill reasonably large gaps.

Other good brazing materials are also available and their suitability may be determined by reading the literature of the various manufacturers.

After each brazing operation, the parts should be soaked in water to dissolve the flux and then washed with hot water.

To braze the boiler, first fit the flues into the firebox flue sheet and screw the stays in place. Slip the front flue sheet on the other end to hold the flues parallel. Stand the assembly on end between some firebricks with the firebox end up and braze around the stays and flues. Do not braze the flues to the front flue sheet at this time. Inspect the joints carefully to see that there are good fillets everywhere. A poor joint is easy to do over at this point but will be difficult to rebraze after the boiler has been assembled.

Rivet the angles to the plate stay and to the firebox shell. Rivet the rod stays in place. Screw the threaded stays into the tapped holes in the walls. Silver solder all the parts together. Make sure the silver solder runs all the way through all the joints.

Braze the firedoor ring and stays to the rear firebox plate.

Put the firebox together and hold each end in place with the bronze screws. Check to see that the parts are square and fit properly. Braze the ends in place. Inspect the joints carefully after removing the flux.

Position the throat plate and hold it in place with two bronze screws. Braze the throat plate, dome flange and the various threaded fittings to the barrel.

Silver solder the bottom blow valve bushing to the right side plate.

Silver solder the blower valve bushing and the grate glass bushing to the backhead. Also rivet and silver solder the firedoor hinge and friction latch bracket. Do not silver solder the angle support bracket.

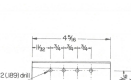
Insert the firebox assembly, line it up and fasten the flanges of the plate stay to the top of the barrel with bronze screws tapped into the flanges. Assemble the side plates and backhead. Line them up carefully and fasten them in place with bronze screws.

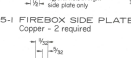
Fit the mud ring and hold it in place with screws. Line up the angle bracket on the backhead. See that it holds the boiler parallel to the frame and then rivit it tight.

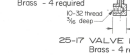
Disassemble the plates and remove the firebox assembly.

Put flux on the plate stay flanges and reinstall the firebox assembly. Silver solder the plate stay to the boiler barrel. This may be done with a Prest-O-Lite torch using the largest tip. Lay the barrel horizontally, firebox up, on a bed of hot charcoal briquets. One of the circular charcoal picnic grills is useful for this operation. It should be used in a location that is out of the wind. Apply silver solder and see that it runs all the way through the joints.

Cool the barrel and soak it in water long enough to remove the flux. Using emery cloth, clean up the surfaces of those joints still to be







¼ dia. soft solder pipe
silver solder
grind after silver soldering
make from ⅜" box wrench
25-14 STEAM LINE WRENCH
Steel - 1 required

brazed.

Reassemble the side plates, backhead and mud ring using flux in the joints. Check to see that all surfaces are square and lined up properly.

Lay the boiler on a bed of hot briquets and, with a pair of tongs, place some hot briquets inside the firebox. Silver solder the backhead, blower line and door ring, side plates, mud plate, mud ring and stay joints. This is a hot job. Allow yourself plenty of time and then take it slowly and carefully.

After the joints have solidified, the boiler may be cooled with water. Do this slowly to avoid the rapid formation of steam. Let the boiler soak for a while and then rinse it well with hot water.

Slip the front flue sheet into the barrel and work the steam line, blower line and flues through it. See that the flue sheet centerlines line up accurately with the barrel centerlines. Put the smokebox support posts in place and silver solder all the joints. Allow the boiler to cool and then immerse it in water slowly and carefully.

Put plugs in the various holes for fittings and fill the boiler with water. Leave the steam dome off so that no pressure can build up. Play the torch on the boiler and bring the water to a slow boil for fifteen or twenty minutes. Pour this water out and rinse with clean hot water.

Close the boiler up and apply 5 to 10 lbs. per square inch of air pressure to check for leaks. Any large leak will be obvious. Small leaks may be seen by using a paint brush to apply soapy water to all the silver soldered joints. Leaks are sometimes difficult to seal up. Those inside the firebox should be silver soldered, if possible. Small pinhole leaks on outside joints may be soft soldered, provided the fitting is good enough to carry the load. Don't rely on soft solder for strength.

Once the boiler is tight, screw in the blower valve and gauge glass and pressure gauge connectors and flow soft solder around the threads to seal them. Soft solder the line #25–12 from the blower valve to the line through the boiler. Soft solder the brass bushing in place to support the sheet metal jackets.

Fill the boiler completely full of water and, using the tender hand pump, apply 200# per square inch. The copper may move slightly but there should be no noticeable bulges or curvature either inside the firebox or on any of the outside surfaces.

Satisfy yourself that the boiler will stand the 200 psi hydrostatic test and then keep the steam pressure at, or below 100 psi.

Live Steam
news

LIVE STEAM CLUB FORMING IN NORTHEAST OHIO

Several months of "leg-work" by Richard Dane has given sufficient acceptance by Live Steamers in the Northeast part of Ohio to form a Club.

The organizational meeting will be held at the home of Clinton Ensworth on Saturday, September 13th, and all interested Live Steamers are invited to attend. Clint has about 500' of his 7½" gauge track laid and some running will be possible. Bring your engine whether completed or not and any other equipment that will be of interest to other Live Steamers.

For a map locating the site, write to either Clinton B. F. Ensworth at Route #1, 6829 Bear Swamp Road in Medina, Ohio 44256 or to Richard Dane at 569 Franklin Avenue in Barberton, Ohio 44203 and plan to attend this organizational meet on September 13th.

FLORIDA STEAM MEET

The Sunshine Region NMRA Fall Meet will be held at the track of Bill Schutt in Homestead, Florida, on October 17–19, and this will be the first time that Live Steam operation will be featured.

Bill has a 7½" gauge track and other steam equipment, including stationary steam models will be shown.

Plan to attend if you can, and for further information contact Wilfred C. Koster, 2000 N. 9th Avenue, Homestead, Florida 33030, phone 305 – 247-2811.

GEORGE SULLIVAN, about 59, died of a heart attack recently. He lived in Horseheads, New York, where he was building an extensive system to operate his Cagney equipment.

George was a bachelor and operated a trucking firm but his biggest desire was to operate his steam equipment. When his doctor ordered him not to drive any more spikes, George's friends pitched in to help. About 200 feet of track remained to be laid at the time of his death.

His passing leaves many saddened friends, but they will continue with his plans for operation of his restored equipment.

MICHIGAN CLUB EXPANDING

At its July meeting the members of the Michigan Steam Locomotive Club voted to change the name of the organization to the Tri-State Locomotive Club. Attendance has always included several from Ohio and Indiana as well as many from Ontario. (Consideration was given to a name which would include the Ontario devotees, but "Tri-State and One Province Live Steam Club" was a little unwieldy!)

The meet scheduled for September 20th is drawing much attention from areas around Michigan. Reservations are filling up. A special train must be in by September 1st and a minimum of 50 deposits must be received in order to schedule the train. Tickets are $4.00 per person and a dinner will be served at Lake City for $1.65 per person. The special train will leave North Cadillac at 10:00 a.m., provide an hour or so at Lake City for inspection and then return to North Cadillac. From there the group will make a drive to inspect the possibility of a club track at LIVE STEAM headquarters. For more information contact J. Bullock, 94 Basswood Drive, Davison, Michigan 48423 or William C. Fitt, Post Office Box 635, Cadillac, Michigan 49601.

NEW RAILROAD MUSEUM ORGANIZED

Elias Jackson Baldwin made a deal with the Santa Fe Railroad for a depot to be built on his ranch (known as the Baldwin Ranch) in return for a right-of-way through his property. The depot was built in 1890 and used by the people of Arcadia and surrounding communities for fifty years.

The depot was closed in 1940 and removed in 1968 to make room for a freeway, but the citizens have raised the money for its restoration. It will be refurnished as it was in 1900 including a baggage room, waiting room, agent's office and agent's home on the first floor with the agent's apartment upstairs.

Michael S. Saltzman of the Los Angeles Live Steamers is very active in this restoration and advises that a list has been prepared of items needed for the refurnishing of this building. It can be obtained from Patricia A. Warren, Historical Curator, Los Angeles State and County Arboretum, 301 N. Baldwin Avenue, Arcadia, California 91006 or by writing directly to Live Steamer Michael S. Saltzman, 6411 Pollard St., Los Angeles, California 90042.

Here's a chance to move some of those pieces out of the attic and into a permanent display.

NJLS SPRING MEET WELL ATTENDED

Here's one 1½" scale crew that got carried away with its work! The two RDG 0–4–0 Camelback switchers are the first of four being built jointly by (l to r) Elmer Nuskey, Jr., Ben Nixon and Gil Ritenburg – plus C. H. Kremers who wasn't on hand for this picture-making project. Lest some of our wives get worried that this sort of thing can really happen we should add that the 1½" 0–4–0's were double-heading at the NJLS Spring Meet and the photo montage is the work of Gil Ritenburg, who with the rest of the crew, remains full size!

HALF-MILE TRACK FOR 3/4" SCALE

"You really don't know if you've got a good engine or not until you've let her out on a half-mile of track, especially where there is one stretch of nearly 1000 feet straight and nearly level!" That's the way Hue Brakke feels about Al O'Neil's track in Lake City, Minn., where the Southern Minnesota Live Steamer Association holds its meets twice each year.

The club met at Al's 2637' track on June 21st and 22nd but very bad weather kept the attendance to a minimum. Only Al's ¾" scale 4–8–4 and Hue Brakke's 4–6–2 braved the weather. The picture (by Bill Warricks) shows Al making some minor adjustments to his 4–8–4 while Dr. Ivar Sigveland, Jr., looks on. In the background Vern Hankins fills the boiler on Hue Brakke's *Green Goddess* while a group of youngsters give serious attention to the marvels of the Steam Age.

With great anticipation the New Jersey Live Steamers awaited their 1969 Spring Meet. It was the first time that they had required advance registration for a meet and the outcome remained to be seen.

They are all breathing easier now, for the meet was a hugh success and enjoyed tremendously by all Live Steamers in attendance. No unmanageable crowds, no line up at the rest rooms, no throngs of curiosity seekers... just a goodly gathering of Live Steamers and their families.

Twenty-two ¾" engines, nineteen 1" engines and thirteen 1½" engines gave plenty of action during the meet and the whole group is looking forward to another equally pleasant meet in the fall.

PIONEER VALLEY LIVE STEAMERS ELECT OFFICERS

The Pioneer Valley Live Steamers held their annual business meeting on June 29th and elected a new slate of officers. The following year will find Alfred Whitman as President, Edward R. Lemire as Vice President, Brenton W. Barnfather as Secretary and Lennox Beach as Treasurer. Len Woerner, Bob Sattler, Bill Lillis and Nel Rickson will serve as Directors.

The Spring Meet on May 16, 17 and 18 was one of the finest ever held. The weather was fine, Live Steamers and their families in abundance and a grand time was had by all.

There were fourteen ¾" engines, ten 1" engines and fourteen 1½" engines in operation during the meet which kept everyone hopping.

The meets at Southwick are always pleasant affairs and if you are interested in attending the Fall Meet on October 11, 12 and 13, contact Brenton W. Barnfather, 3 Fleetwood Drive, Sandy Hook, Conn. 06482 for information.

SO YOU WANT TO BUILD A LIVE STEAM LOCOMOTIVE

by Joseph F. Nelson

CHAPTER 10

Because of the time involved in drawing for the RARITAN boiler in this issue, we must delay the chapter in Joseph F. Nelson's series *So You Want To Build A Live Steam Locomotive* in order to maintain our present three-week publication schedule of LIVE STEAM Magazine.

His series will continue in the next issue with drawings and text on the Young Valve Gear.

NEW JERSEY LIVE STEAMERS, INC.

Dear Bill:

Will you please run the coupon for registration for the Fall Meet of the New Jersey Live Steamers?

Those who registered for the Spring Meet will not have to send in another coupon – we will use the previous list as a guide.

However, anyone who will attend the Fall Meet on September 19th, 20th and 21st who did not register for the Spring Meet should get the information in to us at the very earliest possible time.

Thanks to all whose cooperation made a most pleasant Spring Meet!

Ralph

(Please fill out and mail to)
NEW JERSEY LIVE STEAMERS
Box 205, Liberty Corner
New Jersey 07938

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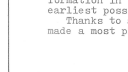
No. in party ____ Days Attending: ☐ Fri. ☐ Sat. ☐ Sun.

What Steam Equipment Do You Plan To Bring?



September

6 **IOWA MODEL STEAM**
7 **ENGINEERS**
Annual Fall Meet
Pershing G. Scott, Secretary
R.F.D. 1
Marion, Iowa 52302

13 **NORTHEAST OHIO AREA**
Organizational Meet
Clinton Ensworth's track
Contact either
Clinton B. F. Ensworth
Route 1
6829 Bear Swamp Road
Medina, Ohio 44256 or
Richard H. Dute
369 Franklin Avenue
Barberton, Ohio 44203

13 **GOLDEN GATE LIVE**
14 **STEAMERS**
Annual Fall Meet
2½" – 3½" – 4½" – 7½"
Gordon French, Secretary
614 18th Avenue
Menlo Park, Calif. 94025
Phone 415 – 325-4209

19 **NEW JERSEY LIVE**
20 **STEAMERS**
21 ADVANCE REGISTRATION REQUIRED
3½" – 4½" – 7¼"
Ralph Green, Secretary
845 Kilsyth Road
Elizabeth, N. J. 07208
Phone 201 – 353-4424

20 **MICHIGAN STEAM**
LOCOMOTIVE CLUB
C & L C – Cadillac
J. Bullock, Secretary
94 Basswood Drive
Davison, Michigan 48423

October

4 **LOS ANGELES LIVE**
5 **STEAMERS**
Annual Fall Meet
3½" – 4¾" – 7½"
Joel Corbin, Secretary
12723 Kittridge Street
North Hollywood, Calif. 91606

11 **PIONEER VALLEY LIVE**
12 **STEAMERS**
13 3½" – 4¾" – 7¼"
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3 Fleetwood Drive
Sandy Hook, Conn. 06482

11 **SOUTHERN MINNESOTA**
12 **LIVE STEAMERS**
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Al O'Neil's track – Lake City
Richard M. Ayers, President
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Rochester, Minn. 55901

17 **SUNSHINE REGION NMRA**
18 **FALL MEET**
19 Bill Koster's track
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Homestead, Florida 33030
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Aug. 10, Sept. 14, Oct. 12
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North Hollywood, Calif. 91606

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Beaurepaire, Quebec, Canada

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Winnipeg 9, Manitoba, Canada

RIVERSIDE LIVE STEAMERS
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Hunter Park – Iowa & Columbia Ave.
Riverside, California
Francis H. Smith, Secretary
5536 Dewey Avenue
Riverside, California 92504
Phone 688-9533 or 683-9028

SOUTHERN CALIFORNIA LIVE STEAM CLUB
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Wendell C. Bishop, Secretary
52 Pond Street
Natick, Mass. 01760

mail stop

SPEED UP FOR "SHORT TIMERS"

I enjoy LIVE STEAM Magazine very much and look forward to each new issue. My only gripe is that Mr. Morewood's series on *building the RARITAN* is taking too long. He only gives enough information each month for one or two nights' work!

Dr. McKenty's *for the apprentice* should turn out to be a winner. Most old timers usually overlook the fact that newcomers don't know much about metals selection, heat treatment, silver soldering, etc. Articles on such basic things may be wasted space to some old timers, but us "short timers" certainly appreciate them.

I'm presently restoring a 1920 Stanley Steamer. I've got the engine installed and running good. The boiler is a mono-tube design (about 500 feet of 5/8" Inconel). From a cold start it will produce 600# of 600° temperature in 45 seconds. All very efficient, but I'm building an original type boiler of fire-tube design. After building a boiler with 1000 tubes, a model boiler with 20–30 tubes should be a snap!

Keep those magazines coming.

WARREN J. BEHLER
594 VICTORY AVENUE
MOUNTAIN VIEW, CALIF. 94040

(Re RARITAN articles: the blame belongs here. Content of each issue is measured by the amount of time that your editor can spend at the drawing board. Drawings are allocated about one week, layout and copy for each issue about one week and the keyline or paste-up for the printer gets about a week. Bill Morewood's work on the series was complete and three of these engines had been built before we began publishing it.)

STEAMER ON FAMILY TREE

With others, I have been working on the history of my family and enjoyed the article by Joseph F. Nelson (LS 3/69) in which he mentions Stephenson Valve Motion and the Railway and Locomotive Historical Society.

In my file I have the following report from two separate sources:

"Mr. John Stobbs came from Newcastle, England. He was a natural mechanic and served an apprenticeship in the locomotive shops of George Stephenson. After he had mastered the trade, he received a pound sterling a day as wages and the best of the workmen received a shilling a day. He invented the first locomotive cab and he designed the first parallel locomotive cylinders. All of the inventions of Mr. Stobbs were given to Mr. Stephenson.

"After leaving the railroad shops he served as Master Mechanic on the first railroad in England and in 1840 he took the first three locomotives to Canada. It took three ships to carry the locomotives, rails and equipment. Two of these locomotives were exhibited at the Chicago World's Fair in 1893.

"The family came to the United States in 1844 and settled in St. Louis. In 1849, after serving as foreman of a St. Louis foundry, they moved to Alton, Illinois where he was employed in the Chicago and Alton shops and, subsequently, the Hanson Machine Works. In 1883 they moved to Nokomis, Ill., and then to Wesson, S. D., where his son was homesteading. He was born in 1808 and died in a fire in 1888."

In this connection I would appreciate any information your readers might furnish including the address of the Locomotive Historical Society, to compile records of the John Stobbs family – my grandfather, Mathew II, being a son.

CLAYTON R. STOBBS
14100 FRANCISQUITO AVE.
BALDWIN PARK, CALIF. 91706

STAINLESS STEEL?

Do the remarks about stainless steel for boilers apply to superheater elements?

FRANK H. MOORE, JR.
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WAYNE, PENNSYLVANIA 19087

DENTAL CHECK-UP WISE

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W. S. R. CRAIBE
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WOULD-LIKE-TO-SEE DEPARTMENT

May I suggest that, in view of the present interest in marine steam engines, you publish articles on that subject slanted to small boats of 18" to 21". The Northwest Coast is in steamboats in a big way. I plan on making a small engine for a boat and would greatly appreciate pertinent information.

Kinetics, Inc., of Sarasota, Florida, is making steam power plants using Freon instead of water in the boiler, which can be *very much* smaller than the usual large boiler required for water, as well as using low temperatures. Any steam engine can be used with Freon.

At present I am building a $\frac{1}{2}$" scale *0–6–0* and a $2\frac{1}{2}$" scale Pacific.

The current article on metals is most valuable.

CHARLES PETERSON
4207 ROSEMARY STREET
CHEVY CHASE, MD. 20015

Mr. Alkire's article (LS 11-12/67) shows cylinders fabricated by welding. I think this is one thing that would help model building in a big way because the cost of these cylinders is a big factor. Being able to weld, I would like to try this.

WM. M. JONES
70 RENO LANE
NEW CASTLE, PA. 16101

...from the cupola

How would Scotty have put it in the old Live Steam Newsletter?

Fresh coal in the firebox, boiler full of water, good track, all boards green and we're rolling down the line again, making up time!

That's about the way it is...and if you started with us three years ago when this publication got underway, your subscription is more than likely due for renewal with the August issue.

That's the next one and since we are turning out one of these every three weeks while making up time, that August issue will be to you quicker than you realize!

You can keep the boards green by handing up your renewal order without waiting for signals and we can keep the throttle wide open here, working towards being back "on the advertised" by the first of the year.

If you're not sure, don't worry about it. We'll have to stop somewhere along the way to send out notices...but you can keep that delay time to a minimum by taking care of it now if you can recall when your subscription began.

There is no increase in the "fare" – instead we are concentrating on more subscribers, more advertisers and bigger ads.

We've got some big plans (some of them are more than six feet long) and they will begin showing up in LIVE STEAM Magazine shortly. So if you know of any Live Steamer who does not regularly enjoy LIVE STEAM Magazine, you might tell him that he'll be missing more than ever!

– W. C. F. –

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12" gauge precision built 3400 class Santa Fe steam locomotive, tender and six cars and new rail. Send $1 for photos and details. K. E. Reynolds, 110 S. Tyler Road, Wichita, Kansas 67209.

¾" scale 0–6–0 B&O switcher chassis completed. Some boiler work done, tender almost complete. Jim Ridenour, 1101 Rainbow Blvd., Hiawatha, Iowa 52233.

Precision built ¾" scale 4–8–4 locomotive and tender. Chassis has been tested on air, boiler never fired, burns coal. Small amount of work needed to complete this locomotive. Mrs. J. E. Griffiths, 280 Panorama Drive, Marion, Va. 24354, Phone 703 – 783-5462.

1" Atlantic chassis less valve gear with finished copper boiler, tender trucks, frame, miscellaneous parts. $500 or best offer. Will ship. G. Broad, 3938 Harrison, Oakland, Calif. 94611.

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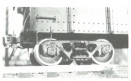

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